ASM for RSSP

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RSSP Meeting

April, 2003

Briefing Outline

- Logistics Transfer Issues
- Project Objectives
- Design Concept
- Automated Wholesale Emulator
- Data Discussion
- Status
- Future Possibilities — The Interactive ASM
- Summary

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- **Logistics Transfer Issues**
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Logistics Transfer Issues

- **Budgeting for and conducting logistics reassignment to DLA**
  - **What items should DLA plan to stock?**
    - **Numeric Stock Objective and Replenishment items**
  - **For replenishment items, what assets are needed to cover procurement lead time and possibly some safety level?**
    - **Additional operating stock?**
  - **What level of supply support should DLA provide after transfer?**

DLA Stockage Policy

- **Cannot precisely emulate DLA policy**
  - **DLA replacing legacy system with BSM software**
  - **Emerging policy similar to current policy**
  - **Safety levels will likely change after logistics reassignment anyway**
- **Recommend transferring least cost safety stock for given fill rate goal**
  - **We are providing that capability in the modified Aircraft Sustainability Model (ASM)**

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Project Objectives

- **Provide RSSP with tools to facilitate transfer of assets, demand history, etc. during logistics reassignment**
  - **Emulate wholesale requirement computation procedures in the Aircraft Sustainability Model (ASM) for the RSSP**
- **Develop prototype process for several pilot programs**
- **Provide training and documentation on use of new ASM features**

ASM Background

- **ASM is the inventory requirements model used by the AF (D087/WSMIS) to compute deployment packages for DLRs**
  - **Also used for initial provisioning applications**
- **This task involves expanding the ASM to compute wholesale and retail consumable requirements, as well as interfacing with the Data Exchange**

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Design Concept

- **Incorporate required functionality in LMI ASM**
  - **Consumable items**
  - **New capabilities within ASM umbrella**
    - **Wholesale emulator complete**
      - **Estimate “proper” amount of assets to transfer to DLA**
    - **Linked Wholesale/Retail (SBSS) also under development**

Design Concept (continued)

- **Link to Data Exchange**
  - **Feed ASM with data to run wholesale emulator**
  - **ASM sends results back to Data Exchange for logistics reassignment**
- **Provide planning and budget estimates for programs**

Design Concept (continued)

- ASM runs “automatically” and feeds results to Data Exchange
  - Stand alone model (DLL)
  - Detects new data text file
  - Runs Automatically
  - ASM will FTP data text files to a location where DE can pick up

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Automated Wholesale Emulator

- **Automated version hard coded to current DLA optimization policy**
  - **Minimum cost safety level for given supply performance**
- **Provide sets of stock levels to DE**

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Data Discussion

- **Wholesale (DLA) Item Data**
  - **NSN**
  - **Price**
  - **Demand quantity per unit time**
  - **Demand frequency per unit time**
  - **Demand variance**
  - **Procurement lead-time**
  - **Item essentiality code**
  - **Assets (on-hand, on-order, backorders)**

Data Discussion (Continued)

- Test with C17 Demand Data
  - Obtained 2 year quarterly demand history on ICP (Boeing) from AFLMA
    - Both demand frequency and quantity
  - Demo available

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Status

- Jan 03 meeting with CSC and RSSP group resolved that:
  - Wholesale emulator would be a stand alone product
    - Data feeds will initiate computation and item results will be fed back to DE
    - DE will produce aggregate results
  - SBSS and DO35K retail emulators are not currently required
    - SBSS emulator has been disabled

Status (continued)

- **Discussed data exchange with CSC**
  - **Data needs and sources for DLA emulator identified**
  - **Data needs and sources for SBSS emulator identified, but deferred**
  - **Data sources to support D035K emulator will also need to be delayed until pilot programs mature**

Status (continued)

- Submitted DISA DECC-D Customer Requirements Questionnaire
- Demo version, wholesale test data, and wholesale user documentation provided to CSC and RSSP
- Updated wholesale data documentation
- Working on integrating computational engines into automated program that will FTP the results to DE
- Awaiting decision on linked Wholesale/Retail (SBSS) emulator

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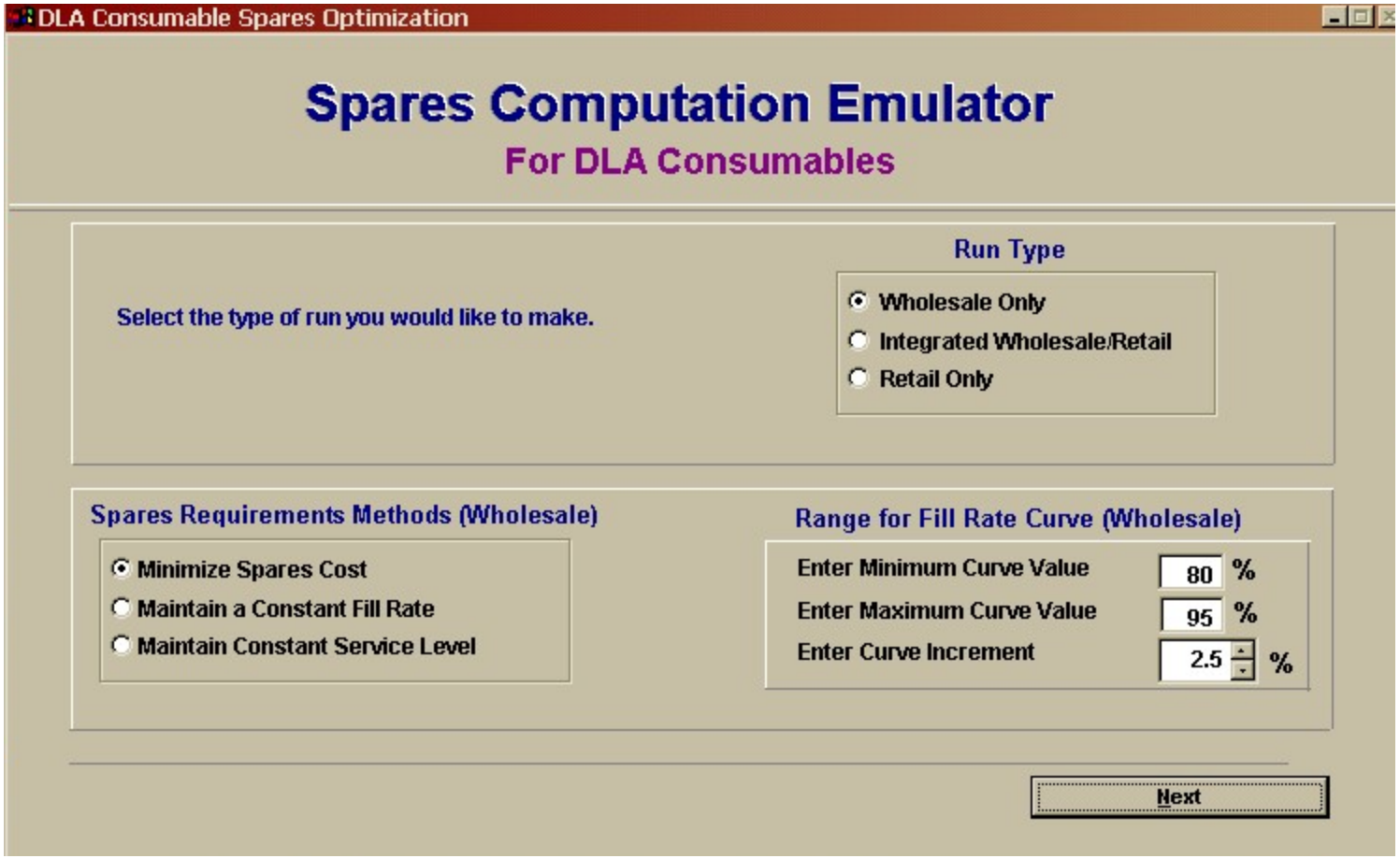
Future Possibilities — the Interactive ASM

- **Original LMI Concept –Interactive ASM for decision making**
  - **Allows project managers to run and re-run data in “what-if” scenarios**
  - **More accessible data management, manipulation, and storage**
  - **Useful for debugging automated implementation**

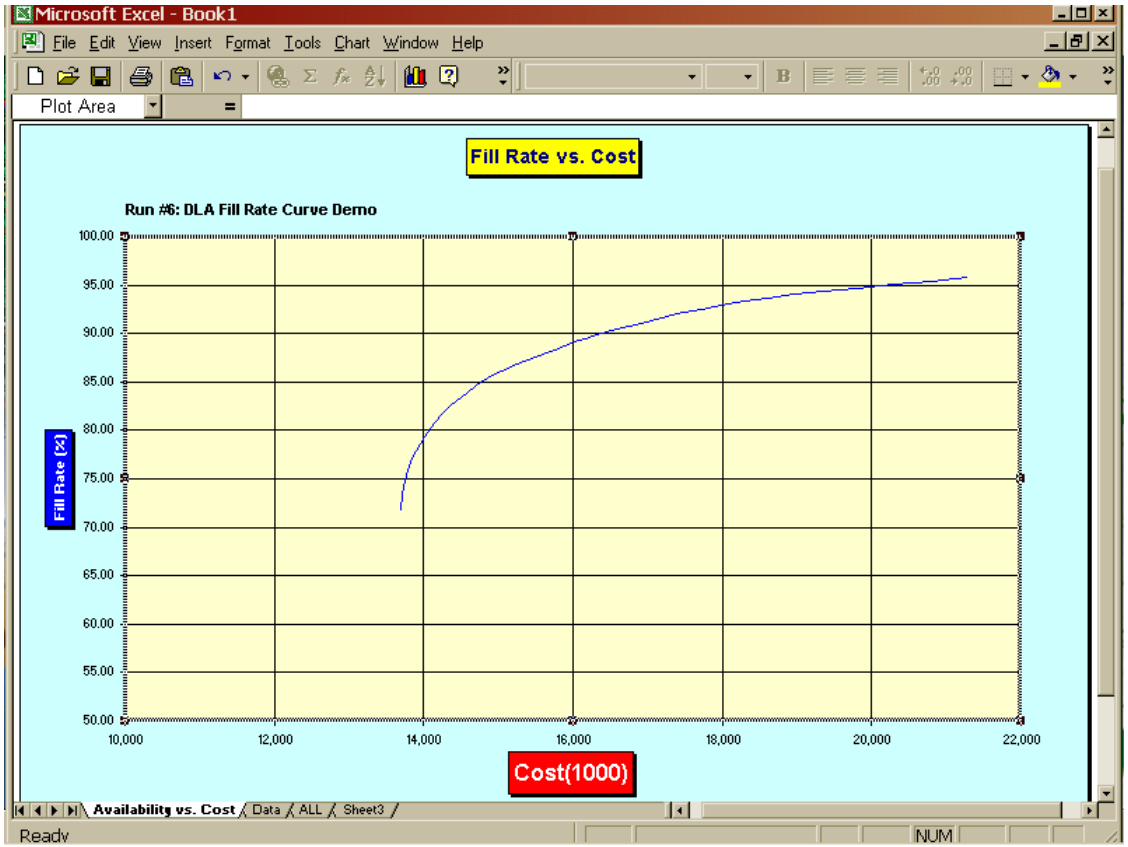
Future Possibilities — the Interactive ASM

- **Perform analyses with different optimization methods**



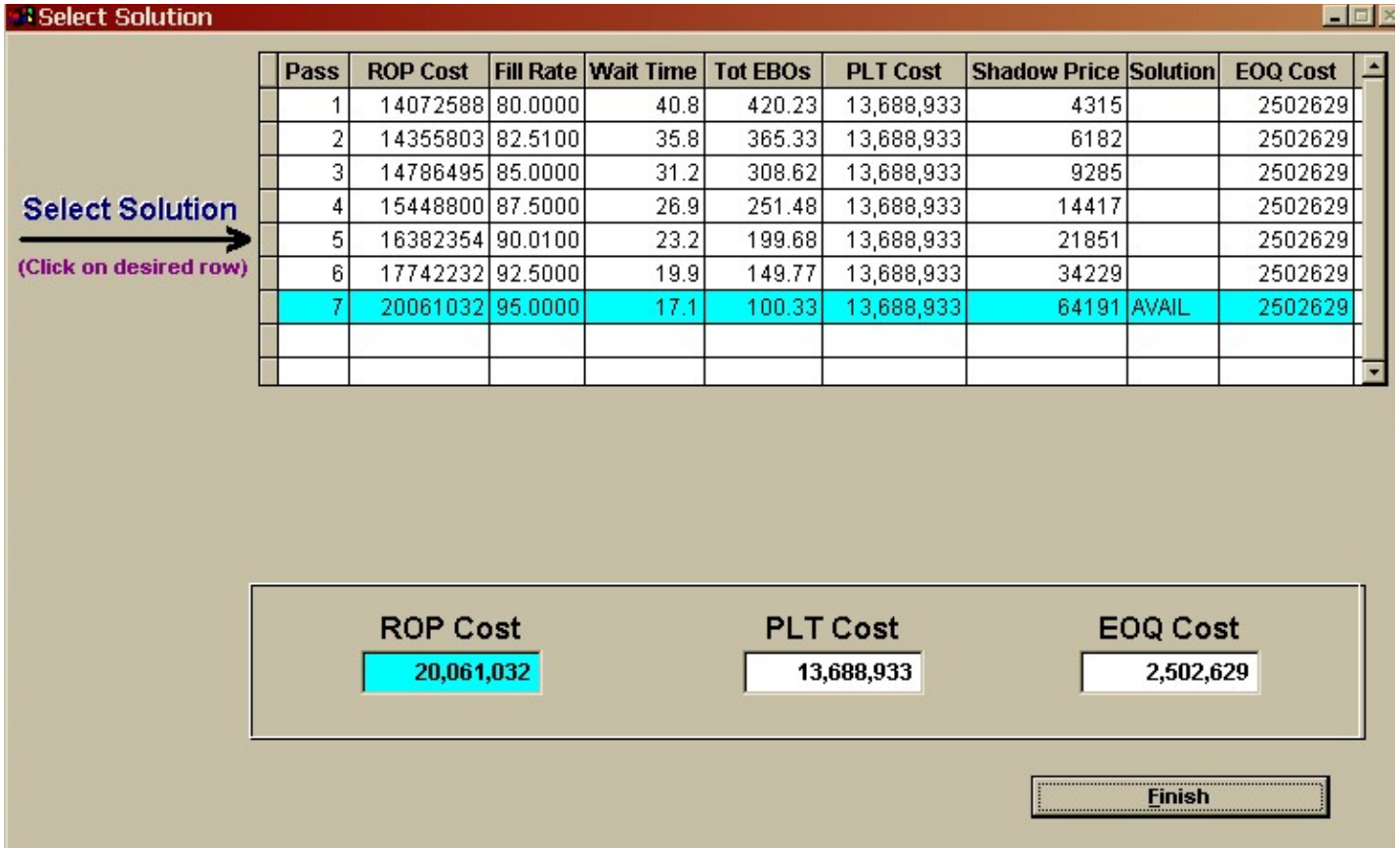
Future Possibilities — the Interactive ASM

- **Create tables showing fill rate vs. cost directly in Excel**



Future Possibilities — the Interactive ASM

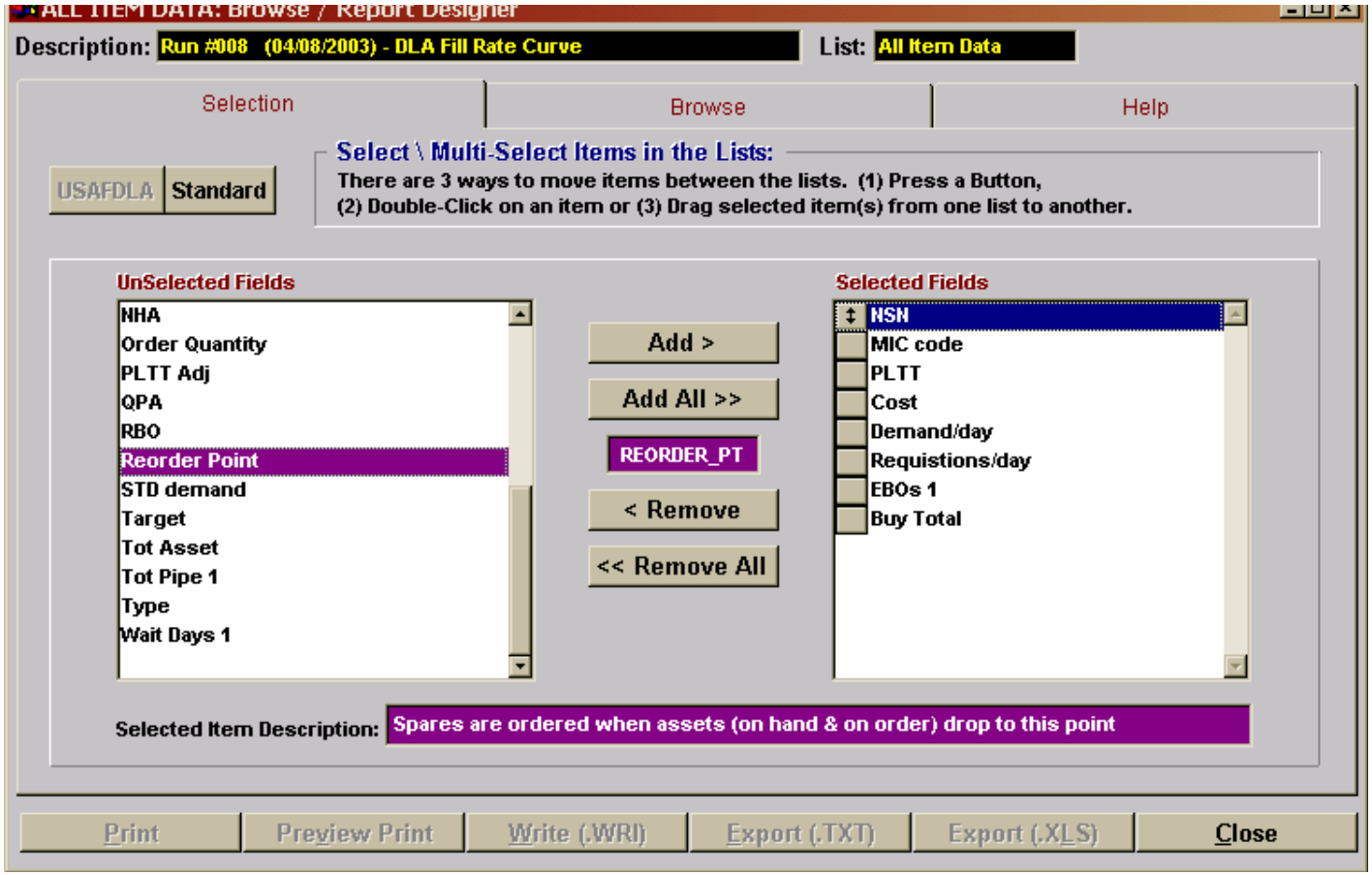
- **View cost/performance trade-off and select solution interactively**



Pass	ROP Cost	Fill Rate	Wait Time	Tot EBOs	PLT Cost	Shadow Price	Solution	EOQ Cost
1	14072588	80.0000	40.8	420.23	13,688,933	4315		2502629
2	14355803	82.5100	35.8	365.33	13,688,933	6182		2502629
3	14786495	85.0000	31.2	308.62	13,688,933	9285		2502629
4	15448800	87.5000	26.9	251.48	13,688,933	14417		2502629
5	16382354	90.0100	23.2	199.68	13,688,933	21851		2502629
6	17742232	92.5000	19.9	149.77	13,688,933	34229		2502629
7	20061032	95.0000	17.1	100.33	13,688,933	64191	AVAIL	2502629

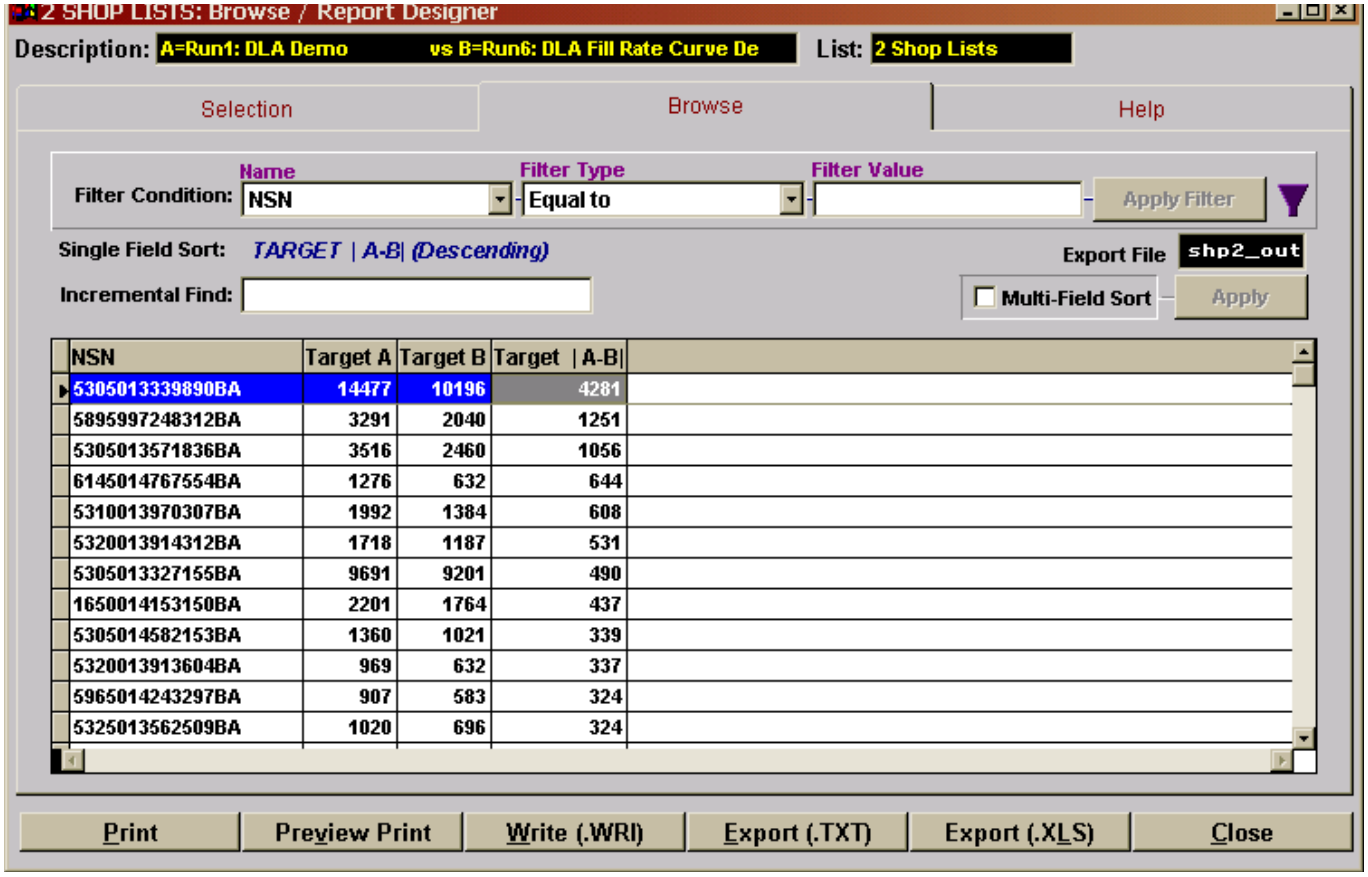
Future Possibilities — the Interactive ASM

- **Flexible item level browses that are easy to export to Excel or Word**



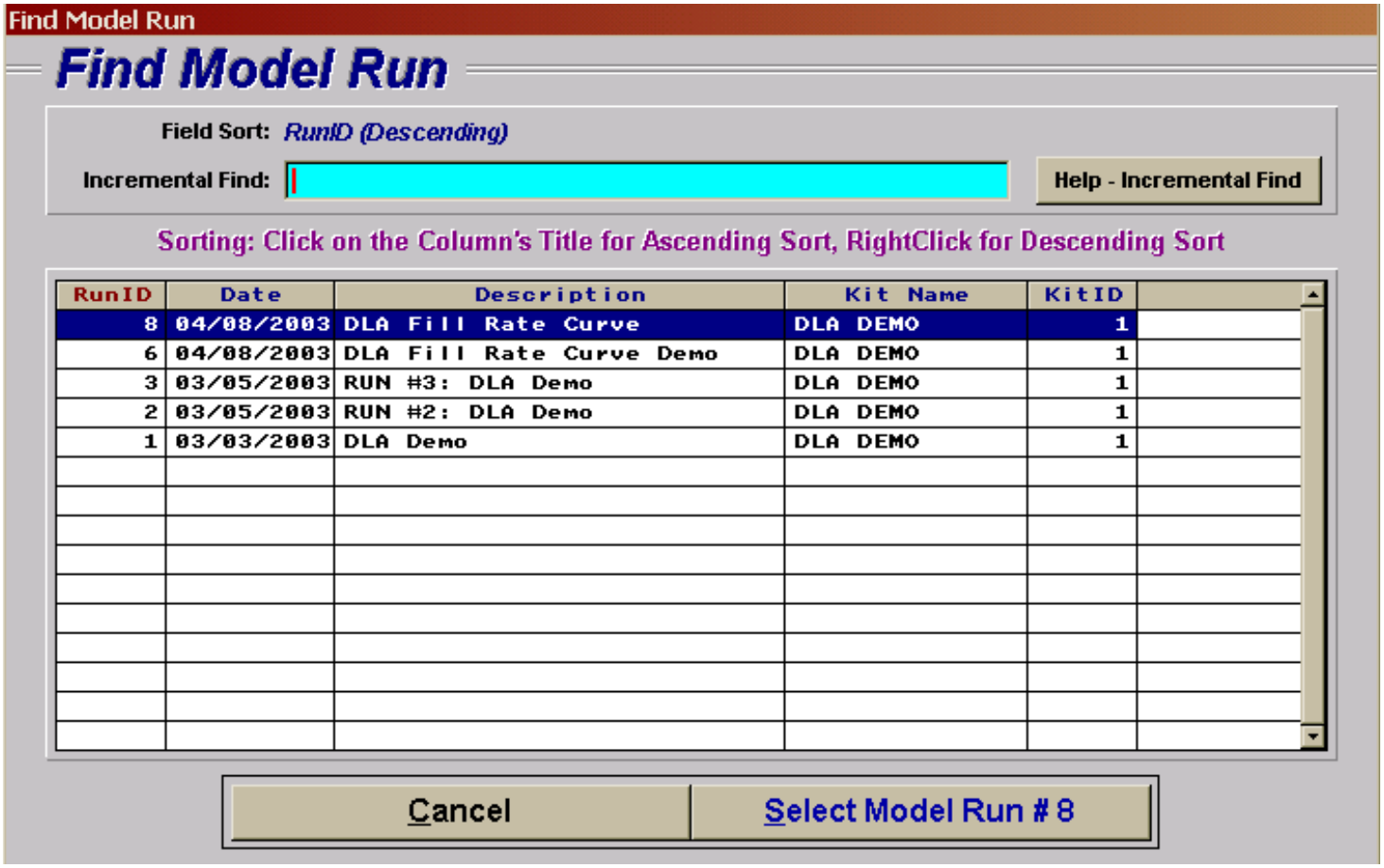
Future Possibilities — the Interactive ASM

- **Compare analyses side by side**



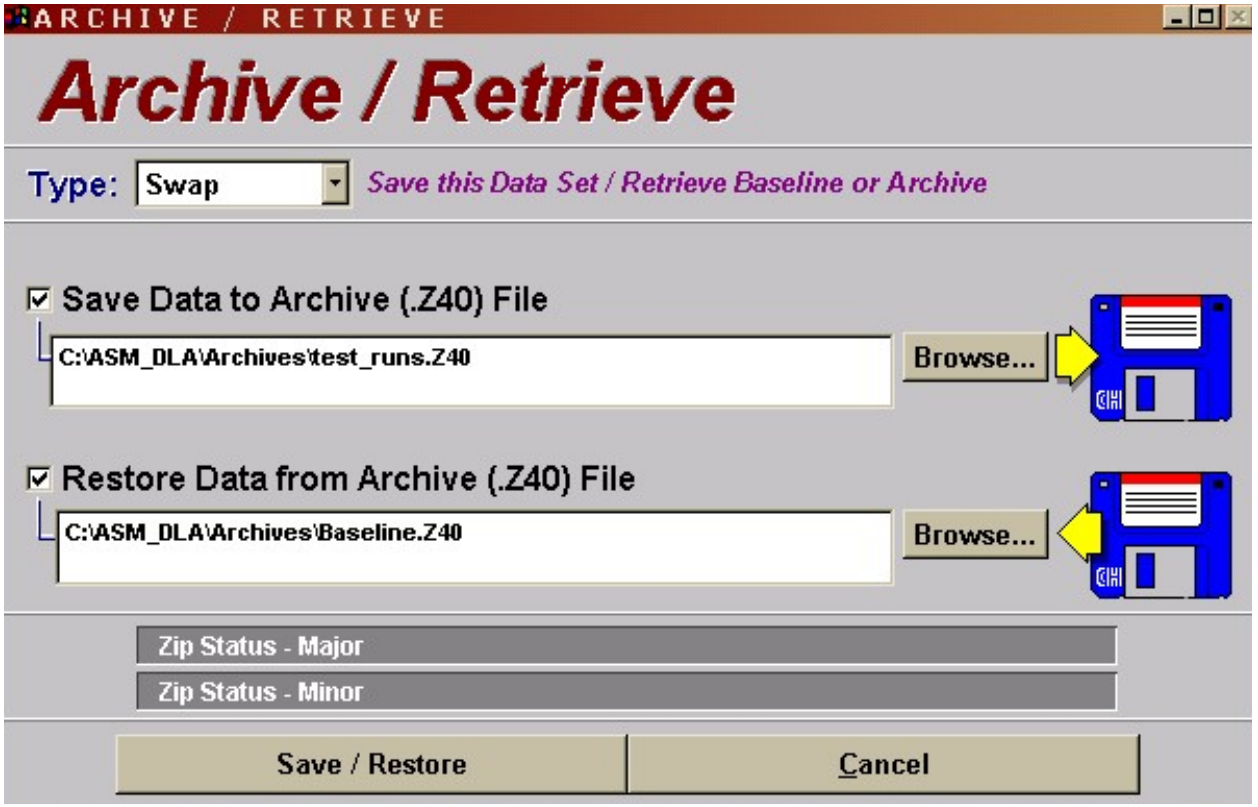
Future Possibilities — the Interactive ASM

- View / manage library of analyses



Future Possibilities — the Interactive ASM

- **Archive/Retrieve Analysis Sets**



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- **Development of wholesale emulator and SBSS retail computation engines complete**
- **Currently finalizing data documentation**
- **Need to resolve implementation options**
  - **Automated (limited) and/or Interactive (full)**
  - **Full install would provide greater capability, including access to RSP capability for DLRs, as well as assist with debugging**

Summary (continued)

- **Training requirement**
  - **Automated requires minimal training**
  - **Full requires comprehensive training**
    - **Capability for making video lessons has been successful in AF implementation**

Questions?